UNITED STATES OF AMERICA

DEPARTMENT OF ENERGY

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NUCLEAR INFRASTRUCTURE

PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

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SCOPING MEETING

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WEDNESDAY, OCTOBER 13, 1999

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The meeting was held in the Auditorium at the American Museum of Science & Energy, 300 South Tulane Avenue, Oak Ridge, Tennessee, at 7:00 p.m.

PRESENT:

JIM PARHAM, Facilitator

U.S. Department of Energy (DOE Headquarters)

COLETTE BROWN, PEIS Project Manager
Office of Nuclear Energy, Science and Technology
DAN FUNK
RAJ SHARMA, NEPA Compliance Officer

U.S. Department of Energy (Oak Ridge Operations)

LARRY BOYD
SHERMAN MARTIN
GORDON MICHAELS
DICK ROTHROCK
BOB WHAM

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PROCEEDINGS

THE FACILITATOR: Good evening and thanks for taking time from your day to be here. Welcome to this Department of Energy meeting on the program: "Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research and Development and Isotope Production Missions in the United States, Including the Role of the Fast Flux Test Facility." That is one big title. This Programmatic Environmental Impact Statement (PEIS) is also known as the Nuclear Infrastructure PEIS, which I think we'll probably be using that more tonight.

I'm Jim Parham. I'll be your facilitator tonight. I serve as a traffic cop and such and one to keep things moving along, but more importantly I'm here to make sure that you are satisfied that we've addressed your concerns. I don't work for DOE nor do I represent them. And actually, this may be a bad thing, I am a professor at Indiana University and I'm also in the Parks Department at Indianapolis. But I have been asked to facilitate this meeting. I enjoy coming down here regularly. Having my family born in La Follette, Tennessee, makes it a wonderful opportunity to come back, especially during the fall foliage.

Again, as I said, my job here is fairly simple to insure that you're satisfied that DOE has provided the answers to the extent practical and also give you an overview of what's going on here in this PEIS. Answers to your questions, as I said, and as well as -- we're going to give you an opportunity, which is very important, to get your comments on the scope of this EI – PEIS. I hope that everyone gets a chance to come and be heard, that means

extending courtesies to everyone else that you expect as a commenter. I always come down to Oak Ridge and find this community to be a wonderful -- gracious southern hospitality. I always have a wonderful audience here and very, very, very polite people. So that's the least of my concerns there.

This is one in a series of seven scoping meetings to be held on this PEIS. As a matter of fact I think this starts a long road trip, a couple of weeks, here in October, here in Oak Ridge. And then Friday in Idaho Falls. Moving on next week to Seattle, Washington; Portland, Oregon; Hood River, Oregon; Richland, Washington; and then back to Washington, D.C. So I assume that the road crew will get a chance to learn about Starbucks Coffee in a big way.

The comment period began for this on September 15, 1999, and runs through October 31, 1999. And, again, that closing date for this comment period is October 31, 1999. Comments received after that date will be considered to the extent practical, as the DOE says in many of its projects.

These hearings are just one way to provide comments to the Department of Energy. And there will be a lot of interest and a lot of comments you may want to provide and there are a lot of ways to do that. I've always been very impressed with DOE when they come up with these ways to allow the public to comment. Because they have the seeking of the comments, you have a court reporter here to take down those comments, there's also the fax that they have, they have the phone lines, they have the voice mail lines, they have, of course, e-mail, and you can use the old traditional snail mail method and all that.

But there are many, many ways for them -- for you to get your comments in so this evening it just one opportunity as we move towards the end of the month. There are many different ways to do that. If you have any questions about that, there's a fact sheet up here about the variety of ways.

When you registered tonight, you should have received a package of materials. There's some materials up there in the back that you're more than welcome to, and I think there's more than enough copies if you need to take some of the copies of the handouts to friends and to colleagues at work. It's great to do that. And we want to make sure that you leave with the information you need to help get this scoping on PEIS done.

We also have a meeting format, an evaluation form, I'd like you to fill that out. We're always looking for a way to do this better and we'd like for you to help us get there with an evaluation form. Other materials that are available include the expert panel report, which is called the Forecast of Future Demand for Medical Isotopes and the Federal Register NOI, Notice of Intent, and several NASA brochures are back there on the space program and what they do with this material.

Let's turn quickly to tonight's format. One purpose for tonight's session is for DOE it give you information on the proposed -- the action forthcoming, rather, the Notice of Intent on this PEIS. Ms. Colette Brown is here, who you may recognize from being here in past meeting, who is with the Department of Energy, Office of Nuclear Energy. And she will present the overview of the need and process as well as get into the details of the Programmatic Environmental Impact Statement. Ms. Brown is the person in the DOE in charge of the preparation of this PEIS. Also, there are some other people in

the audience that we'll introduce and some people you may recognize from here in the past: Dan Funk is from DOE and is a liaison with the people out west at the lab and Dan is here. Also, we have, I think Larry Boyd is here, right here, Larry, from DOE. Sherman is here, I saw him, from DOE, here. Bob Wham, ORNL, right here. So if there are questions that come up, we'll be more than happy to get those microphones out there for questions and Colette will work with me to recognize who you may want to answer questions if you want to do that. And also we have Raj Sharma who is a NEPA Compliance Officer and Raj has presented here numerous times, you may recognize him.

After this brief presentation, I'll facilitate a section where you can ask questions about the presentation. I'd like to stick just to Q and A on that presentation. And then we'll move into the comment period where you can come up to the microphone, please. If you don't feel comfortable coming up to the mic, we can bring a hand-held microphone to you. Charlotte Johnson, the page turner extraordinaire will be out here in a few minutes, and microphone person, will do her imitation of Oprah Winfrey and run the mic out to you, and so you can stay in your chair nice and comfy if you so desire. But we definitely need to get you on a microphone because our court reporter would be very upset if we didn't get this all down so she, of course, hears me talking and knows that she's immediately challenged in the evening to type as many words as she can as quickly as she can with my rapidity here.

We'll move into the comment section and the way this is setup is if you're an individual you have five minutes to comment. We have -- I'll ask in a minute how many show of hands of people who want to comment. If you

represent an organization, and that is represent an organization, we'll have up to ten minutes. Of course, if we have additional time we'll move on to that.

One other piece of the format, if we have elected officials here -- and I am not sure that we have recognized any coming in. I wouldn't have maybe recognized. But if you are an elected official, meaning you are the mayor, legislator, whatever, we'll recognize those people first and then move into the comments. Again organization representatives, ten minutes; five minutes for individuals. And then we can come back until the nine o'clock time. I think that's what we're advertised to.

The period following that comment period or during the comment period. If you have a written copy of your comments, we'd love to get that. And we'll come up and Charlotte can take it. If you don't feel comfortable and want to finish those notes up, send them in, that's great, or you want us to have the court reporter stay a little bit longer and get it down in front, we can do that too. There's no set order for speakers. I know a variety of reasons people have had the opportunity to have a speaker's sign up list and that, but I prefer not to do that. First of all, you probably don't know me and I don't know you, so if I just pick people randomly out of the audience, it seems about the fairest way to do that. So, I will ask for a show of hands for people who would like to ask a question or comment and I hope you find that to be a fair way to do it. That seems to work fairly well. Again if you feel uncomfortable speaking up here, Charlotte will bring the mic up to you at that point. And give her a minute to get up there before you start talking if you could.

Are there any concerns or questions about that format? Seeing no hands at this time, let me introduce Colette Brown to start the presentation and Charlotte if you could come up too. And if you could bring the lights down, please.

(The presentation by Ms. Colette Brown was given)

THE FACILITATOR: Have a seat over here and we'll get started. That's quite a detailed presentation, informative, and it was very helpful. Now, we'd like to move to a period in this presentation and generate some questions from you. I'd like to move to a period now, for a little bit of time to answer questions concerning the presentation. I also would like to see a show of hands, how many people will be providing prepared comments this evening on this? How many plan on presenting a five-minute or a ten-minute, if you are an organization? So we have a couple people on the prepared comment side, so it gives us a chance to take questions before some comments. It is now 7:40 so let's run through about twenty minutes or so of questions, if we have them, and then we can take a break, if needed, for a second and get back into comments or move right into that if we so desire. So anybody with questions they'd like to ask. Okay. Would you like to step up to the mic?

QUESTION AND ANSWER SESSION

MS. BARBARA WALTON: I would like to understand the fuel for the FFTF facility a little bit better. I do not understand why we even need to get MOX fuel from Germany or convert because there are -- the decision has been made to make MOX fuel basically as the result of disposition of surplus you're -- highly enriched uranium and plutonium. Now, I realize those

facilities are not built yet, but since you have six years supply already -- I'd just like to understand that whole thing a little bit better.

MS. COLETTE BROWN: It's my understanding that the MOX fuel that will be created from the MOX disposition program is already committed.

MS. BARBARA WALTON: To what?

MS. COLETTE BROWN: I'll have to get back to you on that.

MS. BARBARA WALTON: That was not part of the –

THE FACILITATOR: Do you want to answer that question? Let's get you a microphone so it will be fair to everybody. Would you identify yourself?

MR. GORDON MICHAELS: My name is Gordon Michaels. I'm with the Oak Ridge National Laboratory and I have some responsibility for the MOX reactor programs that are here at the Laboratory. The plutonium that is coming out of the MOX program is going to go to a fuel fabrication plant for fabrication in a fuel that's suitable for commercial reactors, but it's not research reactor fuel. There is no existing capability in the United States to be able to make plutonium MOX research reactor fuel.

MS. COLETTE BROWN: So that's committed by a commercial industry?

MR. GORDON MICHAELS: It is. The capability being constructed by the commercial industry would not be suitable for fabrication of fuel for FFTF.

MS. BARBARA WALTON: What's different about reactor fuel, research reactor fuel versus commercial?

THE FACILITATOR: The question is: What's the difference between research reactor fuel and commercial fuel?

MR. GORDON MICHAELS: The answer is that there's more of a difficult mix of uranium and plutonium. There's a different density, a different porosity, a different size per pellets, et cetera. There's a number of differences and you wouldn't be able to -- you simply would not be able to fabricate them on the same line as you would use for the commercial reactors.

THE FACILITATOR: Okay. Thank you. Ma'am, for a follow-up question you'll need to come up to the microphone if you'd like to. I saw another hand raised at the back there. Yes, please. Come on down, sir.

AUDIENCE MEMBER: There were two reactors mentioned. HFIR and the Advanced Test Reactor, ATR. What is the life expectancy of these two reactors? How long could we keep running them from this time?

MS. COLETTE BROWN: Correct me if I'm wrong, Oak Ridge, but it's my impression that those reactors can continue to operate for the thirty-five year analysis period that we're considering in this PEIS.

MR. LARRY BOYD: I can't be sure, but I believe that, also.

AUDIENCE MEMBER: Yes. They both can.

MS. COLETTE BROWN: So the life expectancy is within the period of analysis to be considered in the document.

THE FACILITATOR: Additional questions? Yes, sir. Go ahead.

AUDIENCE MEMBER: You mentioned that there was a mission associated with materials irradiation. I represent the HFIR facility and I don't see that there is a mission on materials irradiation beyond what we're working

with at ATR and HFIR at the present times. I wasn't sure where that information came from as an expanded mission for a facility.

MS. COLETTE BROWN: Well, I think you've hit the nail on the head. The fact is that we do have missions identified in the area of materials and fuels irradiation, but we don't have an existing operating reactor facility that could accommodate those missions. When I was talking about expansion of missions at HFIR, I was talking more along the lines of making additional medical isotopes within the current operating envelope at HFIR.

THE FACILITATOR: Do you have a follow-up comment or question?

AUDIENCE MEMBER: What I was trying to say was we don't see at HFIR, we have a lot of materials irradiation facilities that are currently vacant, over seventy-five percent of our materials capability is vacant at the present time, and I was wondering where do we see an indication that there is going to be expansion of materials irradiation needs? It was mentioned in the presentation.

MS. COLETTE BROWN: Well, it's not just a need for a reactor facility to irradiate tools or materials, it's the need for a fast neutron spectrum to test many of the materials and fuels for accelerated life cycle testing or testing of fuels and materials for space reactor applications that couldn't be done at HFIR. We need a Fast Flux to do that. And that's why the Fast Flux Test Facility is an attractive option because that's where you get your fast neutrons.

THE FACILITATOR: Okay. There were a few people who came in -- that had come in at the end of the presentation. I'll just explain where we are. Colette's finished about a half-hour presentation of slides that exist back there

in the back of the room. We are now on the question and comments on that presentation and we'll also be taking comments, verbal or written comments or your verbal version of your written comments or whatever you would like to do up here, also. So I want to mention that.

If you have any questions, Sydel Cavanaugh is at the desk, about the materials in the back or whatever. So we'll run for a few more minutes on the Q and A. We asked for a show of hands of people who wanted to comment at this point and we had one or two only, so this goes until nine o'clock so I want to make sure we cover your questions and concerns here. So with that said, additional questions at this time? Yes, ma'am.

MS. BARBARA WALTON: Again, this is for my understanding, with the tritium resupply EIS, one of the alternatives was an accelerator to be built at Savannah River. Now, the primary source that was chosen was to irradiate fuel at a commercial facility, mainly at Watts Bar here in Tennessee. But the question is: Are they the same type of accelerators? Because I believe that accelerator was chosen as a backup source, although it hasn't been funded, and whether it will ever get built or not is questionable, but is there an inherent difference? I mean, it seems like there's an inherent difference between commercial reactors and research reactors on the fuel, and I still don't understand what the difference is. I mean, I know more about the commercial field because I've read the EIS that led to the decisions. But I also don't know whether -- I mean, certainly I wouldn't think all research reactors would use the same kind of fuel.

MS. COLETTE BROWN: No, they don't. We're in the process now of coming up with a reference design of an accelerator for what these missions

would look like, by taking into account which medical isotopes we want to produce and other identified missions. We will build on attributes of the Savannah River accelerator design, of other designs that are out there, of other existing operating accelerators. Whether it is going to look exactly like the Savannah River accelerator design at this point I can't tell you, but we're working on a reference design now, but it will -- and we may find that it is not -- that design isn't big enough for what we're trying to do here. That's why we have scoped the alternative as being one or more accelerators because one by itself may not be sufficient. So the answer to your question is at this point I don't know.

THE FACILITATOR: Okay. Is there a question back here? Yes, sir.

AUDIENCE MEMBER: There was, and I guess maybe it was a little bit what she was talking about before in what Barbara was asking. When we were building the ANS we ran into problems dealing with the instability of highly enriched fuel. The design restricts forty percent enriched or something like that. I've forgotten exactly. Are you going to run into any trouble in the use of the highly enriched fuels on this fuel reactor starting up the Fast Flux if you go forward with that?

MS. COLETTE BROWN: You're right, we would. And that's why we're going to design a reference design for the new research reactor with LEU, low enriched uranium. It would not be an HEU fueled reactor.

AUDIENCE MEMBER: The other question is: Couldn't Moly-99 figure any way into this or is this taken care of separately?

MS. COLETTE BROWN: Mo-99 had been proposed to be produced at the core research reactor at Sandia National Lab and that has not happened

and it's questionable as to whether it will. So the demand rate for Moly-99 will be factored in into the whole list of medical isotopes that we have identified here that need to be produced.

THE FACILITATOR: Thank you. Additional questions? Yes. Back here. Charlotte, if you could -- send you back there to the lady in the pink there.

AUDIENCE MEMBER: Thanks. I just had a comment. Most of the EIS's and the PEIS's I've seen haven't done a particularly great job of analyzing the different cost alternatives -- the cost associated with each alternative. Is that something that you're going to get into in some detail because it seems to me that would be a pretty significant factor in this decision. And I've been out to Hanford about a year ago and took a tour of the facility. And, I guess, the question I wanted to ask, too, is: Since Hanford, it's my understanding that site is in the -- under the EM program, would that reinstate a portion -- if the FFTF were reinstated, would that fall under your program then, or move out of EM and into –

MS. COLETTE BROWN: Let me answer the first question first. Your first question about cost is you're right. EIS's normally don't pay a whole lot of attention to cost because that's not usually where the cost of each alternative is looked at -- in an environmental document. And technically what I've seen programs do is they analyze the relative cost of each alternative in a separate supporting document and that's what I plan to do here. We will come up with a cost analysis report that will analyze in some detail the relative cost of each alternative and we'll make that report available to the public at the same time as we release the draft.

Now, your second question: If FFTF were to be restarted, the responsibility for funding its operation and restarting it would not come out of the EM's budget. That would come out of the NE's budget. NE, I'm sorry, being the Office of Nuclear Energy. And EM would continue to fund out of its own budget, the cleanup activities.

THE FACILITATOR: Follow-up question?

AUDIENCE MEMBER: Is it funded currently under your budget just in standby mode?

MS. COLETTE BROWN: The standby mode is. Yes, ma'am.

AUDIENCE MEMBER: Okay. Thank you.

THE FACILITATOR: Charlotte, I think there's someone with a hand up behind you with a question.

MR. DICK ROTHROCK: Thank you. My name is Dick Rothrock. I'm a nuclear engineer at the Oak Ridge National Laboratory. And I wanted to ask a little about the three options you have, which I would say are active ones, that is, you're going to either build a new facility or restart one. The other two I think I understand because I know kind of what the capabilities are in the existing facilities. Is there a way to go about setting the requirements for your new hypothetical reactor and accelerators so that they are more or less equitable to those that can be brought by the FFTF or restarted? You mentioned, I think, just now one of -- in the sense that a new reactor would be -- required to use only the fuel from there and it's not as practical as the FFTF. In terms of other things like radiation volume, power range, and what not, are these set in a way that you can compare them apples to apples, so to speak?

MS. COLETTE BROWN: The short answer to your question is yes. And we're in the process now of establishing those criteria for the generic research option and the generic accelerator option. But the radiation volumes and the neutron fluxes will be determined by the types -- the requirements for each of the missions.

MR. DICK ROTHROCK: Follow-up. And then it seems like a neutron beam research or pulsing, things of that nature, are not likely to be required?

MS. COLETTE BROWN: No, we're talking about steady state neutron sources.

MR. DICK ROTHROCK: Thank you.

MS. COLETTE BROWN: You're welcome.

THE FACILITATOR: Any additional questions at this time? Yes, sir. Charlotte.

AUDIENCE MEMBER: Yeah. You mentioned a study, I think you said it was on the back table, which addressed the need for additional isotopes for medical or other purposes. Is the study that we're talking about tonight, is the need for isotopes or the quantity of isotope production part of that scoping or is that taken as a given in the -- the scoping study will only address various ways of achieving that?

MS. COLETTE BROWN: The PEIS will look at various ways of achieving that growth and demand for those medical isotopes. The growth -- the actual growth rates, the demand rates – that we're using to determine which isotopes we're going to need and in what quantities -- are based in part on the expert panel report that I mentioned that's in the back of the room. It's

based on a subcommittee of Nuclear Energy Research Advisory Committee. That was established a couple of years ago that looks solely at production of medical isotopes and the expected shortages and expected growth rates. It will be based in part on another study that was done in Richland on which isotopes will be required. So it will be an educated look at the various sources that are available to us to determine which isotopes and in which quantities and by when we'll need them. So the expert panel report is only one source of many available to us.

AUDIENCE MEMBER: So the need is not really the subject of the scoping study then?

MS. COLETTE BROWN: That's correct.

AUDIENCE MEMBER: Okay. Thank you.

THE FACILITATOR: Thank you. Charlotte, could you bring -- she's handing you a copy of the report.

AUDIENCE MEMBER: Back to the isotopes question. Do you anticipate that the facilities operating budgets are intended to be supported by the sale of these materials or strictly going to be a DOE facility, which subsidizes the isotope program as far as their costs are concerned?

MS. COLETTE BROWN: That's a difficult question. It would continue. I mean, the production of those isotopes at our existing facilities would continue along the same lines as we've been doing it for years. Perhaps -- I'm sorry, Larry, maybe you could help me on that.

THE FACILITATOR: Wait until we get the microphone there.

MR. LARRY BOYD: Larry Boyd. I'm the local DOE overseer for the isotope program at ORNL for Headquarters. Speaking from the isotope

perspective, I believe that ORNL would say that what we expect to do is the isotope program would pay its way. The isotope program does not have the funding, there is not the need out there currently for being a driver to having a reactor. So the decision to have this reactor is going to have to be made by a conglomerate of needs. The isotope program will then be a user of that facility. It would expect to pay its way, a proportionate share of the cost of making isotopes in, be it FFTF or a new reactor, whatever facility does come along.

MS. COLETTE BROWN: Okay. I misunderstood your question, sir. I didn't realize you were asking who would pay for the new reactor or the new accelerator. Is that what you were asking?

AUDIENCE MEMBER: No. I was asking whether or not the operating costs would be subsidized by the sale of isotopes and to what extent as part of the decision process. Some of these are highly -- oriented towards a higher operating cost than others as far as your options are concerned. The question is: Is the anticipation that sales of isotopes will be a major subsidy for the operating costs of any of these facilities?

MR. LARRY BOYD: And I say no. I don't think it will be a major player in that.

MS. COLETTE BROWN: It currently is not.

MR. LARRY BOYD: It currently is not.

MS. COLETTE BROWN: So there's no reason to think it would be in the future.

MR. LARRY BOYD: Even with growth, it still wouldn't be a major, when we are talking about the cost of operating a reactor such as this in particular.

THE FACILITATOR: Okay. Thank you. Glad we got that clarified. Thank you. Additional questions at this time? If there are no additional questions, we can just keep moving on if that's okay. I saw a couple hands of people who would like to comment. We can take a break, but I think if it's okay with everyone, we'll just move on. Is that okay with everyone? I see some heads saying go forward, so we'll do that. As I said before, I'd like to have you as individuals five minutes, as groups if you're representing an organization, you'll have ten minutes. I saw some hands of some folks. So anyone who would like to make their comments, they can be written comments made, too. I am going to stop for a second. I'm going to give the court reporter a chance to rest her hands for just a minute. So if you're ready, we're ready. Who'd like to be the first brave soul up to the microphone? Anybody? For comment? I saw some hands. Did you have some? Why not? Go for it.

COMMENT SESSION

MS. BARBARA WALTON: I'm Barbara Walton. I'm a resident of Oak Ridge. I serve on the Citizens' Advisory Panel of the Local Oversight Committee, which represents the city. The Board of Directors of that organization consists of the mayor of Oak Ridge and executives of the surrounding counties. I am speaking tonight as an individual, although we may send a coordinated set of comments, I don't know whether we will for

the scoping meeting, but certainly when the draft of the PEIS comes out we will.

I would like to make sure that the draft PEIS makes clear the relationships between this proposed set of alternatives and other programs and answers questions that are related. For example, if you would choose to go with the accelerator, would tritium be able to be produced? Now, I know that's not what you're looking at, but, you know, if they should need a backup, would it be capable? That's the kind of relationship questions I would like to see.

I would also like to see the MOX fuel disposition question clearly explained in the draft PEIS. If it's a matter of the percentage of the enriched uranium or the percentages of, you know -- a short explanation of -- a new reactor I assume would not have the same problem as the Fast Flux -- as the FFTF in Washington.

Also, I have a problem with generic site, again. I understand we always use a generic site, but in the case of medical isotopes, a lot of them are short lived and transportation is a very key item in efficiency and decay. A site such as Oak Ridge, which is near a major transportation hub where isotopes can be gotten to where the -- the majority of hospitals are in the east, has efficiency over Hanford, which is so isolated. I would like that issue at least addressed. I mean, I recognize that it is a step-by-step process and you go generic, but it may be a decision factor in whether or not to restart the FFTF.

I would like to see the cost comparisons of the different alternatives. I worked for thirty years for NASA at the Goddard Space Center and I recognize the importance of the plutonium-238. I did provide input on that.

And I'm kind of disappointed that it was cancelled and you're going through other, you know, basically, decision is being delayed by being put in a subsequent action. But I do want to stress that it is important and it should not be delayed for a long period of time.

I also would like to see the PEIS address the relative merit between accelerator performance and reactor performance, both of which will be new with regard to production of medical isotopes. Is one inherently better for that purpose than the other or more -- less costly, et cetera. That type of relative performance. I guess that's it.

THE FACILITATOR: Okay. Thank you. Appreciate it. Additional comments at this time? Anyone else? I thought I saw another hand.

AUDIENCE MEMBER: Can I ask one more question?

THE FACILITATOR: Sure. Please. We'll bring the mic up there to you.

AUDIENCE MEMBER: In one of your fact sheets it says that DOE is still seeking opportunities for private industry to partner or seek control of some of the isotope production. Is this PEIS going to address any aspect of privatization as part of the scope or is that just –

MS. COLETTE BROWN: No.

AUDIENCE MEMBER: Okay.

MS. COLETTE BROWN: It will not.

THE FACILITATOR: Okay. Additional comments or questions at this time? We're going to be here until nine o'clock or later so if not, we'll take a recess at this point. Our court reporter will be here if you come up with some questions or ideas or comments while you're looking over the material in the

back or talking to Colette Brown or one of the other folks. We'll make that available to you so please feel free. If you have written comments, we can accept those at the front. Charlotte is up there. She can grab it from you, too.

So if nothing else we'll just adjourn for now and if you want to get back together, just let us now to get the court reporter. Thanks for coming and look forward to seeing you again next summer. Thanks.

(Whereupon at 9:00p.m., the scoping meeting was concluded)

REPORTER'S CERTIFICATE

I, Tiffany Feltner, Court Reporter and Notary Public, in and for the County of Knox, State of Tennessee at Large, do hereby certify:

That I reported stenographically the proceedings held at the American Museum of Science and Energy; that said proceedings in connection with the meeting were reduced to typewritten form by me; and that the foregoing transcript is a true and accurate record of said proceedings to the best of my skills and ability. I further certify that I have no interest in the outcome of these proceedings whatsoever. This the 13th day of October, 1999.

_____

Court Reporter